

WHAT IS CLAIMED IS:

1. A unit for the servo-assisted operation of a motor-vehicle gearbox having a pair of mechanical operating members for selection and engagement, respectively, the combined movement of which brings about the engagement of one of the transmission ratios of the gearbox, the unit comprising actuator means which can control the combined movement of the mechanical operating members in response to the position of remote gearshift means of the gearbox, wherein the actuator means are remote from the gearbox and are connected to the mechanical operating members by means of elongate mechanical transmission elements.

2. The operating unit of Claim 1, wherein the elongate mechanical transmission elements comprise two push-pull cables.

3. The operating unit of Claim 1, wherein the actuator means include means for controlling the movement of the elongate mechanical transmission elements.

4. The operating unit of Claim 3, further including an electronic control unit operatively interposed between the control means and sensor means which can detect the instantaneous position of the remote gearshift means of the gearbox, the control unit being arranged to process the signals coming from the sensor means and to send operating signals to the control means in order to bring about the movement of the elongate transmission elements in a manner such that these elements bring about the engagement of a transmission ratio of the gearbox which corresponds to the instantaneous position of the remote gearshift means.

5. The operating unit of Claim 4, wherein the remote gearshift means, the electronic control unit, and the actuator means are disposed in an environment separated from the engine compartment of the motor vehicle, the elongate mechanical transmission elements being disposed predominantly in the engine compartment.

6. The operating unit of Claim 5, wherein the elongate mechanical transmission elements extend through a fireproof partition interposed between the engine compartment and a passenger compartment of the motor vehicle, the actuator means being disposed in the vicinity of the fireproof partition, within the passenger compartment.

7. The operating unit of Claim 6, wherein the fireproof partition constitutes a reaction element for a sheath for the sliding of a cable of a respective push-pull cable.

8. The operating unit of Claim 3, wherein the means for controlling the movement of the elongate elements are of the electromechanical type.

9. The operating unit of Claim 8, wherein the means for controlling the movement of the elongate elements include, for each elongate element, an electric motor which can rotate a cylindrical casing having an internal thread in engagement with a screw element connected to an end of the respective elongate element.

10. The operating unit of Claim 9, wherein the electric motor has a drive shaft to which a pinion is keyed, the pinion meshing with a gear connected for rotation with another gear which meshes with a ring gear connected to the outer surface of the cylindrical casing.

11. The operating unit of Claim 9, wherein the screw element includes a coaxial and integral shaft having the function of a rectilinear guide for the movement of the screw element relative to the internal thread of the cylindrical casing, an end of the coaxial shaft being connected to an end of a flexible cable of a respective push-pull cable.

12. A motor vehicle including a gearbox operating unit according to any one of Claims 1 to 11.